HOME OFFICE
PO Box 326
MT AETNA PA 19544

VOICE 717-933-9475
FAX 717-933-1403

BASELINE QUALITY ASSURANCE SURVEY
CLOSING REPORT

MARTIN MEYLIN
MIDDLE SCHOOL RENOVATIONS
LAMPETER-STRASBURG SCHOOL DISTRICT

DECEMBER 3, 2024

PROJECT LOCATION:
1600 BOOK ROAD
LANCASTER, PA 19506

PROJECT CONTRACT FOR:
MR. JOHN LEWIS
BARRY ISETT & ASSOCIATES

Respectfully Submitted
PROAC CORPORATION

Michael Ruth, CIE, CMRS, ASCS, CVI
Industrial Hygienist

Reviewed By
PROAC CORPORATION

Dean R. Klopp, CIE, CMR, ASCS, VSMR
President

TABLE OF CONTENTS

LIST OF ATTACHMENTS

EXECUTIVE SUMMARY:

On December 3, 2024 a Baseline Quality Assurance Survey was performed at the Martin Meylin Middle School for Lampeter-Strasburg School District in Lancaster, PA. The project was managed and supervised by:

Dean Klopp, CIE, CMR, ASCS, VSMR, President, PROAC Corporation
Michael Ruth, CIE, CMRS, ASCS, CVI, Industrial Hygienist, PROAC Corporation

The baseline survey and testing was completed in selected areas throughout the school prior to the start of construction activities. The purpose of the baseline survey was to establish a baseline of environmental conditions prior to construction work starting. Testing was performed in many areas that will be affected by the renovations.

On the day of the survey, samples were obtained during off hours after students and staff were gone.

The survey included direct reading measurements of carbon dioxide (CO_2), carbon monoxide (CO), temperature, relative humidity (RH), particulate matter (PM) levels, formaldehyde (HCHO) and total volatile organic compounds (TVOC) as well as, air samples for viable fungi. Additionally, an inspection to document any visible indications of past or present mold and/or water damage were noted.

The following was identified during the site visit:

- Direct air readings indicated a normal indoor air quality.
- PM levels were acceptable during the survey.
- Samples for airborne viable fungi revealed a normal indoor air quality.
- The inspection revealed no evidence of present water intrusion in the sampled areas.

There were no other issues of note.

METHODOLOGY:

1. Direct Air Readings:

A Fluke 971 Temperature & Humidity meter was utilized to obtain temperature and relative humidity readings.

An RKI GX-6000, six-channel Multi-Gas Monitor was used to sample CO_2, CO, and TVOCs. The range for gases started at "0" with a resolution of 10ppm for CO_2, 1ppm for CO, and 0.1ppm for TVOCs.

PM levels were recorded using a Temtop Seven Channel, Laser Hand Held Particle Counter, documenting micrometer sizes of particles (.3, .5, 1, 2.5, and 10 um).

HCHO was recorded using an M2000 Air Quality Monitor.

2. Inspection:

Visual inspections of the sampled areas were conducted. A moisture pin meter was used to determine if areas were damp or wet.

3. Airborne Fungal Sampling:

Instrumentation consisted of an Anderson type sampler as recommended by the Environmental Protection Agency (EPA) and the American Industrial Hygiene Association (AIHA). The pump was calibrated for a flow rate of 28.3L/minute +/- 5%, with samples drawn for four minutes.

DIRECT AIR READINGS

Direct air readings were obtained with the fungal samples in areas of the building that may be affected by construction renovations, as well as, outdoor areas adjacent to the construction renovation for comparison. Most areas were not occupied with occupants while obtaining the direct air readings.

The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) have suggested that for optimum comfort, indoor temperatures should range from 68.5˚F to 75˚F at 50% RH during the heating season and 75.0°F to 80.5°F during the cooling season. They also suggest a range of 30% to 60% for RH with 65% as the maximum indoor level. Sustained RH above 65% can lead to fungal growth.

Temperature	**Relative Humidity**
Outdoor - 39°F - 43°F	Outdoor - 32% - 38%
Indoor - 60°F - 71°F	Indoor - 24% - 45%

During this site visit, temperatures and RH levels were indicative of a normal indoor environment.

The ANSI/ASHRAE 62.1-2016: "Ventilation for Acceptable Indoor Air Quality" notes that indoor CO_2 concentrations no greater than 700 ppm above outdoor CO_2 concentrations will satisfy a substantial majority (about 80%) of occupants. However, 700 ppm of CO_2, above the outdoor air concentration is **NOT** a health-based standard but instead is based on occupant comfort and used as an indicator of ventilation in occupied spaces.

Carbon monoxide is a colorless, odorless gas which is a byproduct of incomplete combustion. Some common sources of CO are gas space heaters, leaking furnaces, gas water heaters and vehicle exhausts.

The National Institute of Occupational Safety and Health (NIOSH) has a Recommended Exposure Limit (REL) for CO of 35 ppm over a Time Weighted Average (TWA) of 8 hours, and a Ceiling of 200 ppm. The Occupational Safety and Health Administration has set a Permissible Exposure Limit (PEL) of 50 ppm.

CO2	**CO**
Outdoor - 440 ppm - 460 ppm	Outdoor - 0 ppm
Indoor - 480 ppm - 1,820 ppm	Indoor - 0 ppm

Organic chemicals are widely used as ingredients in many building/construction materials including paints, varnishes, cleaners and pressed woods to name a few, which may have short and long-term adverse health effects for some occupants depending on the dosage, type of chemical, and duration of exposure.

TVOC

Outdoor - 0 ppm - .7 ppm

Indoor - .4 ppm - 5.4 ppm

HCHO

Formaldehyde a colorless, strong-smelling gas often used in construction materials such as plywood, fiberboard, and insulation. Formaldehyde is a volatile organic compound (VOC) that can be released into the air from these building materials at room temperature and pose health risks to construction workers and building occupants.

Outdoor - .001 mg/m^3 - .001 mg/m^3

Indoor - .001 mg/m^3 - .002 mg/m^3

During renovations, schools can experience elevated levels of particulate matter (PM) due to various construction activities that generate dust and airborne particles. Demolition, cutting, sanding, and painting can release significant amounts of PM into the air, potentially impacting indoor air quality. Additionally, the movement of construction equipment and materials can introduce further pollutants. It is crucial for schools undergoing renovations to implement effective dust control measures, such as using barriers, ensuring proper ventilation, and employing air filtration systems, to minimize the spread of particulates.

During the survey, 5 sizes of PM were measured per Liter of air; .3µm, .5µm, 1µm, 2.5µm, and 10µm.

PM

Outdoor	**Indoor**
3,003 - 7,939 (.3µm)	897 - 12,631 (.3µm)
1,179 - 3,626 (.5µm)	399 - 4,131 (.5µm)
140 - 254 (1µm)	27 - 404 (1µm)
30 - 59 (2.5µm)	3 - 119 (2.5µm)
2 - 10 (10µm)	0 - 16 (10µm)

PM levels were lower than the outdoor levels in majority of sampled areas. Only the D103 Art Room had elevated levels which was likely due to normal student activity.

MICROBIOLOGICAL SAMPLES

Direct air readings and microbiological samples were obtained using the media listed below:

Media Used

Air Samples for Viable Fungi and Yeasts	Malt Extract Agar

Airborne, viable fungi were sampled for in twenty-five (25) total locations. Of the twenty-five (25) locations, twenty (20) were indoor locations and five (5) were outdoor locations that were used for comparison.

There are currently no standards regarding the amount of fungal or bacterial (microbial) contamination on surfaces or in the air. However, according to the American Conference of Government Industrial Hygienists (ACGIH) and the EPA, the recommended level for

microbiological exposure is an equal or lower quantity inside the building than found outside the building. Also, indoor samples should have the same kind, rank, and order of organisms that are found outdoors.

Sample locations were as follows:

Air Sample Locations

#1 Outside	#2 LGI 15/A125 Guidance
#3 Room 6/Corridor A102	#4 Room 26/A153
#5 Room 37/Corridor A143	#6 Room 41/D103 Art
#7 Outside	#8 Room 44/D114
#9 Room 49/D124	#10 Room 66/D143
#11 Kitchen	#12 Cafeteria
#13 Outside	#14 Auxiliary Gym
#15 Grand Hall	#16 Gymnasium
#17 Boy's Locker Room ((73)	#18 Girl's Locker Room (75)
#19 Outside	#20 Gymnasium Lobby
#21 Room 64	#22 Media Center
#23 Room 61	#24 Room 58
#25 Outside	

Twenty-five (25) Air Samples for Viable Fungi and Yeasts

According to the American Conference of Government Industrial Hygienists (ACGIH) and the EPA, the recommended level for microbiological exposure is an equal or lower quantity inside the building than found outside the building. Also, indoor samples should have the same kind, rank, and order of organisms that are found outdoors.

Outdoor Air Samples

Total Concentration Range - 164 CFU/m^3 - 355 CFU/m^3

Contaminants identified - Acremonium, Alternaria alternata, Aspergillus niger, Aureobasidium pullulans, Botrytis cinerea, Cladosporium, Epicoccum nigrum, Eurotium herbariorum, Paecilomyces variotii, Penicillium, Phoma, Pithomyces chartarum, Scopulariopsis chartarum, and Yeasts.

Primary Contaminants - Cladosporium was the primary contaminant with a concentration range of 106 CFU/m^3 - 230 CFU/m^3.

Indoor Air Samples

Total Concentration Range - No Growth - 118 CFU/m^3

Contaminants identified - Acremonium, Alternaria alternata, Aspergillus fumigatus, Aspergillus niger, Aspergillus ochraceus, Aspergillus versicolor, Aureobasidium pullulans, Beauveria bassiana, Botrytis cinerea, Cladosporium, Epicoccum nigrum, Penicillium, sterile fungi, Stachybotrys chartarum, Syncephalastrum racemosum, and yeasts.

Primary Contaminants - In total, of the twenty (20) indoor samples that were obtained, Cladosporium was the primary contaminant indoors ranging from 9 CFU/m^3 - 62 CFU/m^3.

Explanation - Total indoor fungal concentrations were lower than the outdoor total concentrations in all sampled areas, which is good.

Generally, the same genera and species of fungi identified indoors were found outdoors indicating a normal indoor fungal ecology. Areas with fungal species identified indoors but not outdoors, indicating a differing fungal ecology, were LGI 15, Cafeteria, Auxiliary Gym, Grand Hall, Boy's Locker Room, and Girl's Locker Room.

Keep in mind that although a differing fungal ecology was identified in these areas, concentrations were low and an indoor source is NOT suspected to be present. It is likely that these fungal types originated from the outdoors.

Very low concentrations of Stachybotrys chartarum (9 CFU/m^3) were identified in the Boy's Locker Room. This area will be monitored closely during upcoming visits. No visible mold contamination was identified in this area.

INVESTIGATION

While obtaining fungal samples and direct air readings, visual observations were noted regarding water intrusion and any other IAQ related issues.

The following was identified:

- Presently, there are no issues to report.

RECOMMENDATIONS

Proac is recommending the following:

- There are no recommendations at this time.

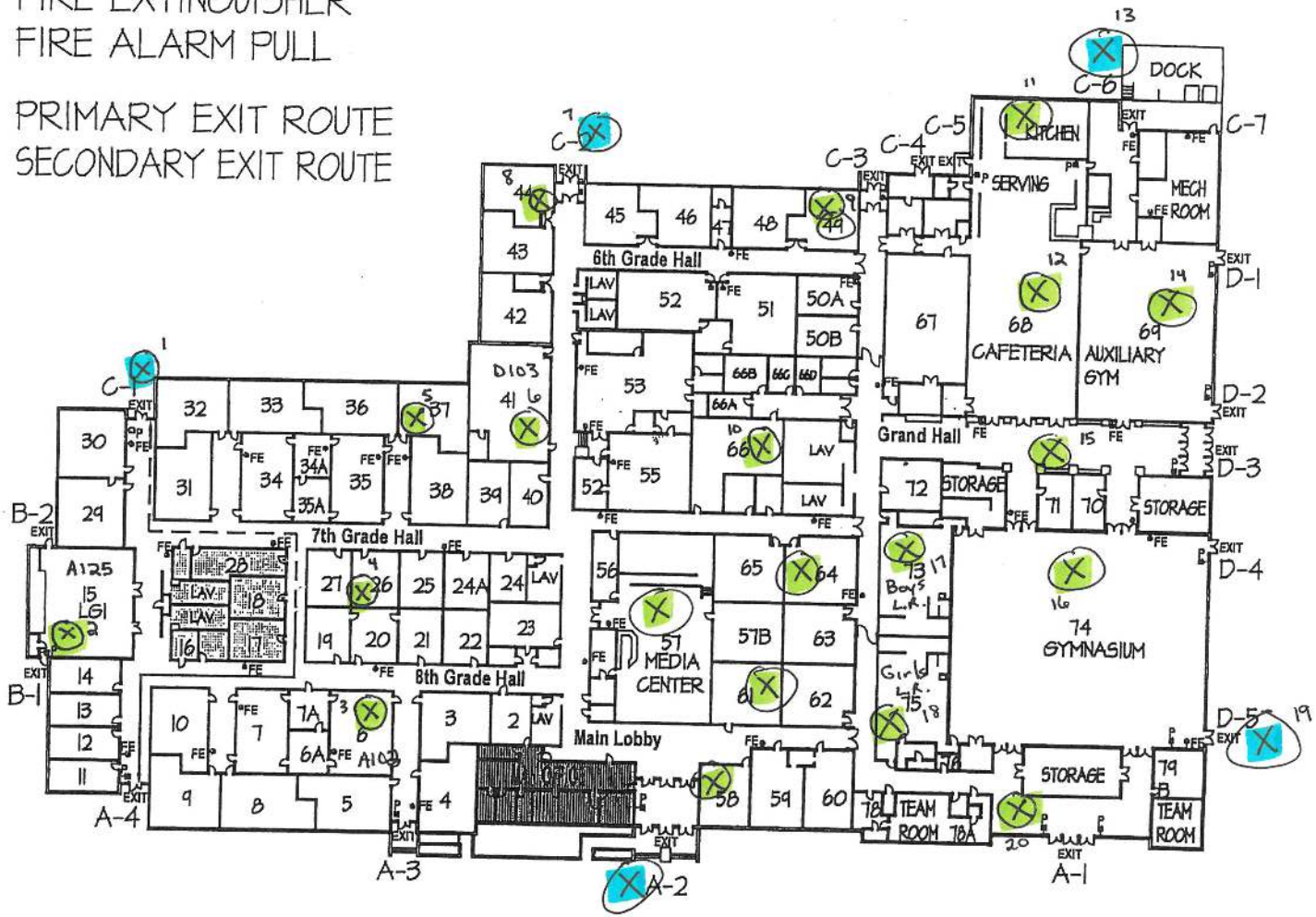
LEGEND

FE FIRE EXTINGUISHER

P FIRE ALARM PULL

PRIMARY EXIT ROUTE

SECONDARY EXIT ROUTE



12/3/24

MARTIN MEYLIN MIDDLE SCHOOL - EVACUATION PLAN

2015.03

24047443

Prestige EnviroMicrobiology, Inc. Tel: 856-767-8300 www.Prestige-em.com
242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

Prestige Proj.#: _____

Chain-of-Custody and Analysis Request Form

Company Name: Proaac Corp. Client Proj. #: Martin Meylin M.S.

Company Address: 8401 Lancaster Ave PO#: _____

Bethel, PA 19507 Date Sampled: 12/3/24

Contact Name: Michael Ruth / Dean Klopp Phone: (717)-933-9475 E-mail: mruth@proaccorp.com / dklopp@proaccorp.com

Sample ID	Location or source	Sample type	Air vol (L)/ Area (inch²)	Water: potable or non-potable	Analysis requests code or description	Turnaround time	Notes or special instructions
1	Outside	MEA	113.2L	N/A	P006	N/A	N/A
2	LG1 15	↓	↓	↓	↓	↓	↓
3	Rm 6						
4	Rm 26						
5	Rm 37						
6	Rm 41						
7	Outside						
8	Rm 44						
9	Rm 49						
10	Rm 66						
11	Kitchen						
12	Cafeteria	↓	↓	↓	↓	↓	↓

Samples Submitted by: (print) Michael W. Ruth Samples Submitted by: (sign) Michael W. Ruth Date submitted: 12/3/24

Received by: (sign & print) TS Date & time received: 12-5-24 / 9:55am Delivered by: Fedex, UPS, USPO, in person

24047443

Prestige EnviroMicrobiology, Inc. Tel: 856-767-8300 www.Prestige-em.com Prestige Proj.#: _____
242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

Chain-of-Custody and Analysis Request Form

Company Name: Proac Corp. Client Proj. #: Martin Meylin M.S.
Company Address: 8401 Lancaster Ave PO#: _____
Bethel, PA 19507 Date Sampled: 12/3/24
Contact Name: Michael Ruth / Dean Klopp Phone: (717)-933-9475 E-mail: mruth@proaccorp.com / dklopp@proaccorp.com

Sample ID	Location or source	Sample type	Air vol (L)/ Area (inch²)	Water: potable or non-potable	Analysis requests code or description	Turnaround time	Notes or special instructions
13	Outside	MEA	113.2L	N/A	P006	N/A	N/A
14	Aux gym	↓	↓	↓	↓	↓	↓
15	Grand Hall						
16	Gymnasium						
17	Boy's L.R.						
18	Girl's L.R.						
19	Outside						
20	Gym Lobby						
21	Rm 64						
22	Media Center						
23	Rm 61						
24	Rm 58						
25	Outside	↓	↓	↓	↓	↓	↓

Samples Submitted by: (print) Michael W. Ruth Samples Submitted by: (sign) Michael W. Ruth Date submitted: 12/3/24

Received by: (sign & print) TS Date & time received: 12-5-24 / 9:55am Delivered by: Fedex, UPS, USPO, in person

Certificate of Analysis
AIHA LAP EMLAP# 102747

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 12/3/2024
Date Received: 12/5/2024
Date Analyzed: 12/12/2024
Date Reported: 12/12/2024
Project ID: 24047443

Client Sample #: 1
Sample Location: OUTSIDE
Lab Sample #: 24047443-001

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **249 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Alternaria alternata	1	9	4	9 CFU/m3
Cladosporium species	12	106	44	9 CFU/m3
Eurotium herbariorum	1	9	4	9 CFU/m3
Paecilomyces variotii	8	71	30	9 CFU/m3
Penicillium species	4	35	15	9 CFU/m3
Phoma species	1	9	4	9 CFU/m3
	27	**239**	**~100%**	

Client Sample #: 2
Sample Location: LGI 15
Lab Sample #: 24047443-002

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **36 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	1	9	25	9 CFU/m3
Epicoccum nigrum	2	18	50	9 CFU/m3
Syncephalastrum racemosum	1	9	25	9 CFU/m3
	4	**35**	**~100%**	

Client Sample #: 3
Sample Location: RM 6
Lab Sample #: 24047443-003

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **27 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Aspergillus niger	1	9	33	9 CFU/m3
Cladosporium species	1	9	33	9 CFU/m3
Epicoccum nigrum	1	9	33	9 CFU/m3
	3	**27**	**~100%**	

Client Sample #: 4
Sample Location: RM 26
Lab Sample #: 24047443-004

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **54 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	4	35	67	9 CFU/m3
Penicillium species	2	18	33	9 CFU/m3
	6	**53**	**~100%**	

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 12/3/2024
Date Received: 12/5/2024
Date Analyzed: 12/12/2024
Date Reported: 12/12/2024
Project ID: 24047443

Client Sample #: 5
Sample Location: RM 37

Lab Sample #: 24047443-005

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **27 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	3	27	100	9 CFU/m3
	3	**27**	**~100%**	

Client Sample #: 6
Sample Location: RM 41

Lab Sample #: 24047443-006

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **54 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Acremonium species	3	27	50	9 CFU/m3
Cladosporium species	3	27	50	9 CFU/m3
	6	**53**	**~100%**	

Client Sample #: 7
Sample Location: OUTSIDE

Lab Sample #: 24047443-007

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **355 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Alternaria alternata	1	9	3	9 CFU/m3
Aureobasidium pullulans	3	27	8	9 CFU/m3
Botrytis cinerea	1	9	3	9 CFU/m3
Cladosporium species	26	230	68	9 CFU/m3
Epicoccum nigrum	3	27	8	9 CFU/m3
Penicillium species	2	18	5	9 CFU/m3
Yeasts	2	18	5	9 CFU/m3
	38	**336**	**~100%**	

Client Sample #: 8
Sample Location: RM 44

Lab Sample #: 24047443-008

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **9 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	1	9	100	9 CFU/m3
	1	**9**	**~100%**	

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 12/3/2024
Date Received: 12/5/2024
Date Analyzed: 12/12/2024
Date Reported: 12/12/2024
Project ID: 24047443

Client Sample #: 9
Sample Location: RM 49
Lab Sample #: 24047443-009

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **27 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Alternaria alternata	1	9	33	9 CFU/m3
Aureobasidium pullulans	1	9	33	9 CFU/m3
Cladosporium species	1	9	33	9 CFU/m3
	3	**27**	**~100%**	

Client Sample #: 10
Sample Location: RM 66
Lab Sample #: 24047443-010

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Results: **No Growth**
Air Volume: **113.2 L**
Positive Hole: **400**
MRL: **9 CFU/m3**

Client Sample #: 11
Sample Location: KITCHEN
Lab Sample #: 24047443-011

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **54 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	3	27	50	9 CFU/m3
Epicoccum nigrum	1	9	17	9 CFU/m3
Penicillium species	2	18	33	9 CFU/m3
	6	**53**	**~100%**	

Client Sample #: 12
Sample Location: CAFETERIA
Lab Sample #: 24047443-012

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **18 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Beauveria bassiana	1	9	50	9 CFU/m3
sterile fungi	1	9	50	9 CFU/m3
	2	**18**	**~100%**	

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 12/3/2024
Date Received: 12/5/2024
Date Analyzed: 12/12/2024
Date Reported: 12/12/2024
Project ID: 24047443

Client Sample #: 13
Sample Location: OUTSIDE

Lab Sample #: 24047443-013

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **183 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Acremonium species	1	9	5	9 CFU/m3
Aspergillus niger	1	9	5	9 CFU/m3
Botrytis cinerea	1	9	5	9 CFU/m3
Cladosporium species	12	106	60	9 CFU/m3
Epicoccum nigrum	1	9	5	9 CFU/m3
Penicillium species	4	35	20	9 CFU/m3
	20	**177**	**~100%**	

Client Sample #: 14
Sample Location: AUX GYM

Lab Sample #: 24047443-014

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **99 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Acremonium species	1	9	9	9 CFU/m3
Aspergillus versicolor	1	9	9	9 CFU/m3
Cladosporium species	7	62	64	9 CFU/m3
Penicillium species	1	9	9	9 CFU/m3
Yeasts	1	9	9	9 CFU/m3
	11	**97**	**~100%**	

Client Sample #: 15
Sample Location: GRAND HALL

Lab Sample #: 24047443-015

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **81 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	5	44	56	9 CFU/m3
Penicillium species	1	9	11	9 CFU/m3
Yeasts	2	18	22	9 CFU/m3
sterile fungi	1	9	11	9 CFU/m3
	9	**80**	**~100%**	

Client Sample #: 16
Sample Location: GYMNASIUM

Lab Sample #: 24047443-016

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Results: **No Growth**

Air Volume: **113.2 L**
Positive Hole: **400**
MRL: **9 CFU/m3**

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 12/3/2024
Date Received: 12/5/2024
Date Analyzed: 12/12/2024
Date Reported: 12/12/2024
Project ID: 24047443

Client Sample #: 17
Sample Location: BOYS LR

Lab Sample #: 24047443-017

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **36 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Acremonium species	1	9	25	9 CFU/m3
Cladosporium species	2	18	50	9 CFU/m3
Stachybotrys chartarum	1	9	25	9 CFU/m3
	4	**35**	**~100%**	

Client Sample #: 18
Sample Location: GIRLS LR

Lab Sample #: 24047443-018

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **63 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Aspergillus ochraceus	1	9	14	9 CFU/m3
Aspergillus versicolor	1	9	14	9 CFU/m3
Cladosporium species	4	35	57	9 CFU/m3
Penicillium species	1	9	14	9 CFU/m3
	7	**62**	**~100%**	

Client Sample #: 19
Sample Location: OUTSIDE

Lab Sample #: 24047443-019

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **220 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	16	141	67	9 CFU/m3
Epicoccum nigrum	1	9	4	9 CFU/m3
Penicillium species	4	35	17	9 CFU/m3
Scopulariopsis chartarum	1	9	4	9 CFU/m3
Yeasts	2	18	8	9 CFU/m3
	24	**212**	**~100%**	

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 12/3/2024
Date Received: 12/5/2024
Date Analyzed: 12/12/2024
Date Reported: 12/12/2024
Project ID: 24047443

Client Sample #: 20
Sample Location: GYM LOBBY
Lab Sample #: 24047443-020

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **118 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Aspergillus fumigatus	1	9	8	9 CFU/m3
Aspergillus ochraceus	2	18	15	9 CFU/m3
Aureobasidium pullulans	1	9	8	9 CFU/m3
Botrytis cinerea	1	9	8	9 CFU/m3
Cladosporium species	4	35	31	9 CFU/m3
Penicillium species	2	18	15	9 CFU/m3
Yeasts	2	18	15	9 CFU/m3
	13	**115**	**~100%**	

Client Sample #: 21
Sample Location: RM 64
Lab Sample #: 24047443-021

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **9 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Yeasts	1	9	100	9 CFU/m3
	1	**9**	**~100%**	

Client Sample #: 22
Sample Location: MEDIA CENTER
Lab Sample #: 24047443-022

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **9 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Alternaria alternata	1	9	100	9 CFU/m3
	1	**9**	**~100%**	

Client Sample #: 23
Sample Location: RM 61
Lab Sample #: 24047443-023

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **9 CFU/m3**
Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Epicoccum nigrum	1	9	100	9 CFU/m3
	1	**9**	**~100%**	

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 12/3/2024
Date Received: 12/5/2024
Date Analyzed: 12/12/2024
Date Reported: 12/12/2024
Project ID: 24047443

Client Sample #: 24
Sample Location: RM 58

Lab Sample #: 24047443-024

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **45 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	2	18	40	9 CFU/m3
Penicillium species	1	9	20	9 CFU/m3
sterile fungi	2	18	40	9 CFU/m3
	5	**44**	**~100%**	

Client Sample #: 25
Sample Location: OUTSIDE

Lab Sample #: 24047443-025

Test: 1030 Air, Fungal Count w/ Genus ID: SOP 3.2
Positive Hole Corrected Result: **164 CFU/m3**

Air Volume: **113.2 L**
Positive Hole: **400**

Organism(s) Isolated:	Raw Count	CFU/m3	% Total	MRL
Cladosporium species	12	106	67	9 CFU/m3
Epicoccum nigrum	3	27	17	9 CFU/m3
Penicillium species	2	18	11	9 CFU/m3
Pithomyces chartarum	1	9	6	9 CFU/m3
	18	**159**	**~100%**	

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected:	12/3/2024
Date Received:	12/5/2024
Date Analyzed:	12/12/2024
Date Reported:	12/12/2024
Project ID:	24047443
	Page 8 of 10

Footnotes and Additional Report Information

Debris Rating Table

1	Minimal (<5%) particulate present	Reported values are minimally affected by particulate load.
2	5% to 25% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
3	26% to 75% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
4	75% to 90% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
5	Greater than 90% of the trace occluded with particulate	Quantification not possible due to large negative bias. A new sample should be collected at a shorter time interval or other measures taken to reduce particulate load.

Pace Analytical Services, LLC shall be responsible for all the information provided in the report, except when information is provided by the customer. Data provided by a customer can affect the validity of results and shall be clearly identified. Results apply to the samples as received. Pace Analytical Services, LLC is not responsible for the sampling activity, such as air and water volume, area, and mass unit. The report shall not be reproduced except in full without the approval of the laboratory to ensure that parts of a report are not taken out of context. Data interpretation of this report will be the client responsibility based on their sampling.

1. Penicillium/Aspergillus group spores are characterized by their small size, round to ovoid shape, being unicellular, and usually colorless to lightly pigmented. There are numerous genera of fungi whose spore morphology is similar to that of the Penicillium/Aspergillus type. Two common examples would be Paecilomyces and Acremonium. Although the majority of spores placed in this group are Penicillium, Aspergillus, or a combination of both. Keep in mind that these are not the only two possibilities.

2. Ascospores are sexually produced fungal spores formed within an ascus. An ascus is a sac-like structure designed to discharge the ascospores into the environment, e.g. Ascobolus.

3. Basidiospores are typically blown indoors from outdoors and rarely have an indoor source. However, in certain situations a high basidiospore count indoors may be indicative of a wood decay problem or wet soil.

4. The colorless group contains colorless spores which were unidentifiable to a specific genus. Examples of this group include Acremonium, Aphanocladium, Beauveria, Chrysosporium, Engyodontium microconidia, yeast, some arthrospores, as well as many others.

5. Hyphae are the vegetative mode of fungi. Hyphal elements are fragments of individual Hyphae. They can break apart and become airborne much like spores and are potentially allergenic. A mass of hyphal elements is termed the mycelium. Hyphae in high concentration may be indicative of colonization.

6. Dash (-) in this report, under raw count column means 'not detected (ND)'; otherwise 'not applicable' (NA).

*7. The positive-hole correction factor is a statistical tool which calculates a probable count from the raw count, taking into consideration that multiple particles can impact on the same hole; for this reason the sum of the calculated counts may be less than the positive hole corrected total.

8. Due to rounding totals may not equal 100%.

9. Analytical Sensitivity for each spores is different for Non-viable sample when the spores are read at different percentage. Analytical Sensitivity is calculated as spr/m ^{3} divided by raw count. spr/m ^{3} = raw counts x (100/ % read) x (1000/Sample volume). If Analytical Sensitivity is 13 spr/m ^{3} at 100% read, Analytical Sensitivity at 50% read would be 27 spr/m ^{3}, which is 2 times higher. Analytical Sensitivity provided on the report is based on an assumed 100% of the trace being analyzed.

*10. Minimum Reporting Limits (MRL) for BULKS, DUSTS, SWABS, and WATER samples are a calculation based on the sample size and the dilution plate on which the organism was counted. Results are a compilation of counts taken from multiple dilutions and multiple medias. This means that every genus of fungi or bacteria recovered can be counted on the plate on which it is best represented.

*11. If the final quantitative result is corrected for contamination based on the blank, the blank correction is stated in the sample comments section of the report.

12. The results in this report are related to this project and these samples only as received.

13. For samples with an air volume of < 100L, the number of significant figures in the result should be considered (2) two. For samples with air volumes between 100-999L, the number of significant figures in the result should considered (3) three. For example, a sample with a result of 55,443 spr/m^3 from a 75L sample using significant figures should be considered 55,000. The same result of 55,443 from a 150L sample using significant figures should be considered 55,400 spr/m ^{3}.

14. If the In/Out ratio is greater than 100 times it is indicated >100/1, rather than showing the real value.

Terminology Used in Direct Exam Reporting

Conidiophores are a type of modified hyphae from which spores are born. When seen on a surface sample in moderate to numerous concentrations they may be indicative of fungal growth.

***: Applicable to the reported data for culture testing**

Dr. Michael Berg
Technical Director

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected:	12/3/2024
Date Received:	12/5/2024
Date Analyzed:	12/12/2024
Date Reported:	12/12/2024
Project ID:	24047443
	Page 9 of 10

GLOSSARY

Acremonium species: Acremonium is a large genus of fungi that grows worldwide on many environmental substrates. There are more than 100 species. They are commonly recovered in environmental samples, but are not usually of any allergenic, toxigenic or pathogenic importance, however some species are considered opportunistic pathogens.

Alternaria alternata: Alternaria is found world-wide. It is often found growing in buildings. It grows in soil, on organic debris, on food and on some textiles. Some species cause plant disease. It is potentially allergenic and sometimes causes hypersensitivity pneumonitis. It is also pathogenic in immunocompromised people. It produces several mycotoxins, of which the most poisonous is tenuazonic acid.

Aspergillus fumigatus: Aspergillus is one of the most common fungi worldwide, occurring on a large number of substrates. A. fumigatus is widely distributed in soils; found on plants, seeds, cotton, and compost. This species produces multiple mycotoxins, has the ability to grow in a wide range of temperatures, and is considered an opportunistic pathogen in humans.

Aspergillus niger: Aspergillus is one of the most common fungi worldwide, occurring on a large number of substrates. A. niger is typically isolated from soil, seeds, dried fruits, and nuts. It is one of the most commonly reported fungi from indoor environmental samples. This species produces the mycotoxin Ochroatoxin A (OTA) that has been shown to be harmful to some animals, but rarely humans. A. niger has been linked to some human aspergillosis cases.

Aspergillus ochraceus: Aspergillus is one of the most common fungi worldwide, occurring on a large number of substrates. A. ochraceus is a widely distributed soil fungus, also recovered on food products and other indoor environmental surfaces. This species produces many mycotoxins and is an opportunistic pathogen to a wide variety of animals, livestock, and in some cases, humans.

Aspergillus versicolor: Aspergillus is one of the most common fungi worldwide, occurring on a large number of substrates. A. versicolor is commonly found in soil, many kinds of dry food products, and a variety of indoor environmental sources. This organism is a common cause of the old musty odor in damp, warm indoor environments. This species produces the mycotoxin Sterigmatocystin, produces allergy-like symptoms in people, and is considered an opportunistic pathogen to humans.

Aureobasidium pullulans: Aureobasidium occurs world-wide and is commonly found on dead plants, wood, and textiles; in soil and in air. In houses, it is common in kitchens and bathrooms on a variety of surfaces. It is creamy in appearance but darkens with age. Aureobasidium produces small, slimy, colorless spores. It can also have a yeast phase where spores are produced by budding and is often referred to as a black yeast.

Beauveria bassiana: No definition provided

Botrytis cinerea: No definition provided

Cladosporium species: Cladosporium is one of the most common fungi worldwide. It grows almost everywhere and on a wide variety of substrates. It is commonly found in buildings on wood or cellulose substrates and around the edges of windows.

Epicoccum nigrum: Commonly found in soil and wide range of outdoor environment. Considered a plant pathogen. Epicoccum is a fungus that occurs all around the world and grows most commonly on the stems and leaves of many plants.

Eurotium herbariorum: Eurotium is an ascomycete, characterized by whitish to bright yellow spherical fruiting bodies (cleistothecia) containing spherical asci which in turn each enclose eight colourless ascospores. The ascospores are oblate (like a flattened sphere) and may have equatorial ridges, thus resembling pulleys. Species of Eurotium grow best in dry situations and are usually cultivated on media high in sucrose or glycerine. They are common in homes, stored grains, and rodent dwellings. E. herbariorum may pose a health risk related to major barrier breaks such as corneal perforation, major surgery, peritoneal or venous catheter presence, and injection drug use. Eurotium species are teleomorphs of Aspergillus species, notably the Aspergillus glaucus group among others. Eurotium is common and is most closely related to Emericella, another genus with Aspergillus anamorphs. Eurotium is likely to be present along with related Aspergilli if growth has been long term and the nutrients of the substrate are conducive for the conversion to sexual phase.

Paecilomyces variotii: Paecilomyces occurs worldwide on soil, fruit, wood and many other substrates. It produces unicellular, almost colorless, dry spores in unbranched chains. These spores readily become airborne but are impossible to distinguish from those of Aspergillus and Penicillium unless cultured. One species is relatively thermotolerant. This genus occasionally causes opportunistic infections in immunocompromised patients but is not regarded as a serious pathogen. It can be allergenic and toxigenic.

Building Sciences
, 7184 North Park Drive
Pennsauken , NJ 08109
8564861177

PROAC
8401 South Lancaster Ave.
Bethel PA , 19507
Project: **MARTIN MEYLIN M.S.**

Condition of Sample(s) Upon Receipt: Acceptable

Date Collected:	12/3/2024
Date Received:	12/5/2024
Date Analyzed:	12/12/2024
Date Reported:	12/12/2024
Project ID:	24047443
	Page 10 of 10

Penicillium species: Penicillium is one of the most common fungi worldwide, occurring on a very large number of substrates. There are about 250 species, some of which can grow at low temperatures. They produce unicellular, usually globose, hydrophobic spores, in unbranched chains on distinctive broom-shaped structures. The spores are usually green-blue, greenish or grey green in mass. Some species may cause infections of humans, particularly in immunocompromised patients. Some species produce mycotoxins, and some may be allergenic. The spores, when present without the diagnostic structures that produce them, are impossible to differentiate visually from those of Aspergillus.

Phoma species: Phoma species are a group of fungi that belongs to the Coelomycetes group. They are ubiquitous and can be found outdoors in plant materials and soil. Indoor growth is not uncommon, it can be frequently found on ceiling tiles, drywalls, and also on the reverse side of linoleum. This fungus may growth as well on paper, paint, and wood. Phoma spp. produce very small and colorless spores which are release in sticky masses of spores out of the opening in the pycnidia once mature. Because of the way the spores are produced inside the asexual fruiting bodies (pycnidia), the spores are not readily disseminated by air currents. It can trigger allergies, and may occasionally cause keratitis in humans. It does not appear to be toxigenic.

Pithomyces chartarum: Pithomyces is found worldwide. It grows on dead leaves and on paper. It produces dark, multicellular, dry spores which become airborne relatively easily but usually enter indoor environments with outside air.

Scopulariopsis chartarum: No definition provided

Stachybotrys chartarum: No definition provided

sterile fungi: No definition provided

Syncephalastrum racemosum: No definition provided

Yeasts: Yeasts are fungi that are not in a single taxonomic or phylogenetic group, but are instead defined by their morphology. They are usually unicellular, oval-shaped cells that typically replicate by budding. Yeasts are found throughout nature, inhabiting soil, vegetation and aquatic ecosystems. They are also commonly found on the bodies of humans and other animals.

OUTSIDE GENERAL TESTING SET-UP

INSIDE GENERAL TESTING SET-UP

PO Box 326
MT AETNA PA 19544

PROAC CORPORATION
Proactive Building Maintenance

VOICE 717-933-9475
FAX 717-933-1403

INDOOR AIR QUALITY SURVEY

Purpose: BASELINE IAQ SURVEY Location MARTIN MEYLIN MIDDLE SCH

Date: 12/03/2024

NO.	TIME	TEMP °F	RELATIVE HUMIDITY %	CARBON DIOXIDE PPM	CO	TVOC	OCCUPANCY #PERSONS	COMMENTS
1	3:19	43	38	460	0	0	1	OUTSIDE
2	3:25	71	27	680	0	2.0	2	LGI/A125 (GUIDANCE)
3	3:33	71	29	760	0	2.4	1	ROOM 6/CORRIDOR A102
4	3:40	71	27	680	0	2.4	3	ROOM 26/A153
5	3:47	70	34	1,620	0	3.3	1	ROOM 37/A143 CORRIDOR
6	3:57	71	37	1,820	0	2.5	2	ROOM 41/D103 ART
7	4:04	42	32	460	0	0	1	OUTSIDE
8	4:11	68	38	1,320	0	3.2	1	ROOM 44/D114
9	4:17	69	33	960	0	3.2	1	ROOM 49/D124
10	4:25	70	24	500	0	1.5	1	ROOM 66/D143
11	4:32	69	24	560	0	.7	1	KITCHEN
12	4:38	71	24	600	0	.4	1	CAFETERIA
13	4:45	40	33	440	0	0	1	OUTSIDE
14	4:50	70	28	760	0	.7	1	AUX. GYM
15	4:56	66	30	700	0	1.9	1	GRAND HALL

*Denotes areas that reached or exceeded the ASHRAE comfort standards for CO^2

PO Box 326
MT AETNA PA 19544

VOICE 717-933-9475
FAX 717-933-1403

INDOOR AIR QUALITY SURVEY

Purpose: BASELINE IAQ SURVEY Location MARTIN MEYLIN MIDDLE SCH

Date: 12/03/2024

NO.	TIME	TEMP °F	RELATIVE HUMIDITY %	CARBON DIOXIDE PPM	CO	TVOC	OCCUPANCY #PERSONS	COMMENTS
16	**5:02**	**67**	**29**	**640**	**0**	**2.5**	**1**	**GYMNASIUM 74**
17	**5:09**	**68**	**31**	**640**	**0**	**3.0**	**1**	**BOY'S L. R. 73**
18	**5:16**	**67**	**30**	**720**	**0**	**2.6**	**1**	**GIRL'S L. R. 75**
19	**5:24**	**39**	**37**	**440**	**0**	**.4**	**1**	**OUTSIDE**
20	**5:31**	**60**	**40**	**660**	**0**	**1.9**	**1**	**GYM LOBBY**
21	**5:39**	**69**	**45**	**1,780**	**0**	**5.4**	**1**	**ROOM 64**
22	**5:46**	**69**	**30**	**660**	**0**	**4.6**	**1**	**MEDIA CENTER**
23	**5:53**	**68**	**31**	**680**	**0**	**4.0**	**1**	**ROOM 61**
24	**6:00**	**66**	**28**	**480**	**0**	**2.7**	**1**	**ROOM 58**
25	**6:08**	**39**	**33**	**440**	**0**	**.7**	**1**	**OUTSIDE**

*Denotes areas that reached or exceeded the ASHRAE comfort standards for CO^2

PO Box 326
MT AETNA PA 19544

PROAC CORPORATION
PROACTIVE BUILDING MAINTENANCE

VOICE 717-933-9475
FAX 717-933-1403

PARTICLE COUNTS

Purpose: IAQ MEASUREMENT & DOCUMENTATION **Location/No:** MARTIN MEYLIN MIDDLE SCH

Date: 12/03/2024

NO.	.3	.5	1.0	2.5	10.0	COMMENTS
1	3,505	4,451	163	30	2	OUTSIDE
2	1,467	564	60	17	5	LGI/A125 (GUIDANCE)
3	1,659	642	68	18	4	ROOM 6/CORRIDOR A102
4	1,172	536	58	8	1	ROOM 26/A153
5	1,580	580	63	14	5	ROOM 37/A143 CORRIDOR
6	12,631	4,131	404	119	16	ROOM 41/D103 ART
7	3,894	1,735	221	59	10	OUTSIDE
8	897	463	72	13	2	ROOM 44/D114
9	924	432	51	10	1	ROOM 49/D124
10	1,065	458	39	5	0	ROOM 66/D143
11	1,418	602	58	8	0	KITCHEN
12	1,059	471	46	4	0	CAFETERIA
13	3,003	1,179	140	30	3	OUTSIDE
14	1,289	5573	64	9	2	AUX. GYM
15	1,043	476	60	9	2	GRAND HALL

*Denotes areas that reached or exceeded the ASHRAE comfort standards for CO^2

PO Box 326
MT AETNA PA 19544

PROAC CORPORATION
PROACTIVE BUILDING MAINTENANCE

VOICE 717-933-9475
FAX 717-933-1403

PARTICLE COUNTS

Purpose: IAQ MEASUREMENT & DOCUMENTATION **Location/No:** MARTIN MEYLIN MIDDLE SCH

Date: 12/03/2024

NO.	.3	.5	1.0	2.5	10.0	COMMENTS
16	1,172	570	68	14	3	GYMNASIUM 74
17	1,024	486	56	10	1	BOY'S L. R. 73
18	1,448	704	98	26	6	GIRL'S L. R. 75
19	3,834	1,617	201	37	5	OUTSIDE
20	1,.864	858	120	33	7	GYM LOBBY
21	1,426	848	149	18	2	ROOM 64
22	1,280	651	141	34	6	MEDIA CENTER
23	1,384	399	27	3	0	ROOM 61
24	1,428	639	60	6	0	ROOM 58
25	7,939	3,626	254	34	3	OUTSIDE

*Denotes areas that reached or exceeded the ASHRAE comfort standards for CO^2

REFERENCES

Information and excerpts may be taken from:

- 29 CFR 1910 General Industry Regulations & Standards
- 29 CFR 1926 Construction Industry Regulations & Standards
- U.S. Environmental Protection Agency (EPA)
- Occupational Safety and Health Administration (OSHA)-2020
- American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) Standard 62-2019 , 55-2020, & 180-2018
- Bioaerosol Assessment and Control, American Conference of Governmental Industrial Hygienists, 1999
- Guidelines on Assessment and Remediation of Fungi in Indoor Environments, New York City Department of Health, 2008 (NYCDOH)
- National Fire Prevention Assoc. 96, Standard for Ventilation Control & Fire Protection of Commercial Cooking Operations, 2021
- National Air Duct Cleaners Association - Assessment, Cleaning, & Restoration of HVAC Systems, ACR 2021 (NADCA)
- NFPA 105, Standard for Smoke Door Assemblies and Other Opening Protectives, 2019
- NFPA 80, Standard for Fire Doors and Other Openings Protectives, 2019
- NFPA 90A, Standard for the Installation of Air-Conditioning and Ventilation Systems, 2018
- NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2006 Edition
- Recognition, Evaluation, and Control of Indoor Mold American Industrial Hygiene Assoc.– 2008
- World Health Organization- Guidelines for Indoor Air Quality, Dampness, and Mould, 2009
- National Institute of Occupational Safety & Health (NIOSH) Pocket Guide to Chemical Hazards, 2007

REPORT CONDITIONS

This report is not to be considered a warranty, but a Baseline Indoor Air Quality Survey Closing Report on the conditions existing in the areas included in the scope of work at the time of the work only. Conditions only include work performed and reported here. We are not responsible for any errors or omissions due to hidden environmental or mechanical conditions. We are not responsible for any claims more than the amount of the total scope or otherwise noted in contract.